UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* KENNETH R. OWENS, SRINIVAS V. MAKAM,
CHANGCHENG HUANG, and VISHAL SHARMA

———————

Appeal 2009-001221
Application 09/696,051
Technology Center 2600

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Decided: February 26, 2010

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Before KENNETH W. HAIRSTON, JOHN A. JEFFERY, and
THOMAS S. HAHN, *Administrative Patent Judges.*

HAHN, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants invoke our review under 35 U.S.C. § 134 from the

Examiner's final rejections of claims 4-6 and 12-29. We have jurisdiction

under 35 U.S.C. § 6(b). We affirm-in-part.

## STATEMENT OF THE CASE

Appellants claim a method and system using Internet multi-protocol label switches (MPLSs) that provide protection and working paths for information transmissions. A working path failure causes a failure notification to be sent to a MPLS protection switch having a node upstream of the failure, which is at an origin of protection and working paths. After receiving a failure notification, the MPLS protection switch selectively routes input data to a protection path.[1] Claim 4 is illustrative:

> 4. A multi-protocol label switching (MPLS) system protection switch comprising:
>
> a first data input port into which MPLS data is received from a data source;
>
> a first data output port into which MPLS data is sent to a second MPLS switching system comprising an MPLS working path;
>
> a second data output port from which MPLS data is sent to a third MPLS switching system comprising an MPLS protection path; and
>
> a second data input port adapted to connect to a path that follows the MPLS working path for receiving a failure notification associated with a failure;
>
> whereby data received at the data input port from the data source can be selectively routed from the second MPLS switching system to the third MPLS switching system by a node at an origin of both the MPLS working path and the MPLS protection path and upstream to the failure.

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[1] *See generally* Spec. 7:4-8; 21:9-13; 27:2-8 and 14-17; Figs. 1 and 7.

The Examiner relies on the following prior art reference to show unpatentability:

Cao                              US 6,721,269 B2                              Apr. 13, 2004
                                                                       (filed May 25, 1999)

1.  The Examiner rejected claim 24 under 35 U.S.C. § 112, second

    paragraph, as being indefinite for failing to particularly point out and

    distinctly claim the subject matter which Appellants regard as the

    invention (Ans. 3).

2.  The Examiner rejected claims 4-6 and 12-29 under 35 U.S.C. § 102(e) as

    being anticipated by Cao (Ans. 4-10).

         Rather than repeat the arguments of Appellants or of the Examiner,

we refer to the Briefs and the Answer[2] for their respective details.  In this

decision, we have considered only those arguments actually made by

Appellants.  Arguments that Appellants could have made but did not make

in the Briefs have not been considered and are deemed to be waived.  *See* 37

C.F.R. § 41.37(c)(1)(vii).

*Appellants' Arguments*

         Appellants group claims 4-6 and 12-29, and collectively argue the

rejection under § 102(e) of the included independent claims (App. Br. 7-9;

Reply Br. 7-10).  Appellants, *inter alia*, argue that the appealed independent

claims "recite the feature of protection switching being performed at an

origin of the working and protection paths" (Reply Br. 9), and assert that "no

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[2] We refer throughout this opinion to (1) the Appeal Brief filed Oct. 23,
2007, (2) the Examiner's Answer mailed Jan. 11, 2008, and (3) the Reply
Brief filed Mar. 10, 2008.

protection switching occurs at the source router of the Cao, et al. patent"
(*id.*).

ISSUE

Have Appellants shown that under § 102 the Examiner erred in
finding Cao teaching protection switching being performed at an origin of
working and protection paths as recited in the appealed independent claims?

FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a
preponderance of the evidence:

1. Cao describes an apparatus and method for Internet protocol flow ring
   protection switching that uses a plurality of routed label switched
   paths between source and sink routers (Abstract).

2. Cao discloses that the document as drafted uses "the term 'routers' . . .
   to describe both routers and switches" (col. 1, ll. 49-52). Further, Cao
   discloses that "a plurality of paths from a source (entry) router to a
   sink (destination) router" are established for transferring information
   data (col. 2, ll. 28-33).

3. Cao's "sink router chooses one of the[] [established] paths as the
   primary path and communicates along this primary path unless the
   primary path fails" (col. 3, ll. 35-40). When "a failure is detected, the
   router that first detects the failure propagates this information to the
   source and sink routers . . . [, and] the sink router switches to the
   secondary path for communications" (col. 3, ll. 49-55; *see also* col. 2,
   ll. 64-67).

4. Cao discloses that when a sink router is alerted to a path failure "the sink router switches to the secondary path for communications [, and that] [t]he source router may then establish another explicitly routed communications path to act as a new secondary path" (col. 3, ll. 53-57).

5. Independent claim 4 covers a "multi-protocol label switching (MPLS) system protection switch comprising: . . . a second data input port . . . for receiving a failure notification . . . ; whereby data received at the data input port . . . can be selectively routed . . . by a node at an origin of both the MPLS working path and the MPLS protection path and upstream to the failure" (App. Br. 11, claim 4, ll. 1, 2, and 11-18).

6. Independent claim 6 covers a "multi-protocol label switching (MPLS) system comprising: . . . a second MPLS switching system coupled to [a] first MPLS protection switch via a . . . MPLS working path; a third MPLS switching system coupled to the first MPLS protection switch via a . . . MPLS protection path; an upstream reverse notification tree (RNT) data path that follows the MPLS working path . . . that upon a failure can carry a failure notification by which . . . a switchover from the MPLS working path to the MPLS protection path, by a node at an origin of the MPLS working path and the MPLS protection path, can be initiated" (App. Br. 12, claim 6, ll. 1, 2, 5-13, and 15-19).

7. Independent claim 12 covers a "method for MPLS protection switching from a working path to a protection path comprising: transmitting a failure notification . . . to a protection switch node . . . ; and routing data at the protection switch node . . . upon receipt of the failure notification, wherein the protection switch node is at an origin

of the working path and the protection path and the protection switch node is upstream to the failure" (App. Br. 13, claim 12, ll. 1-10).

8. Independent claim 21 covers "[a]n apparatus for MPLS protection switching from a working path to a protection path comprising: . . . a protection switch adapted to switch traffic . . . upon receiving [a] failure notification, wherein the protection switch is at an origin of the working and protection paths" (App. Br. 14, claim 21, ll. 1-3 and 8-11).

## PRINCIPLES OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631 (Fed. Cir. 1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 (Fed. Cir. 1983), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

## ANALYSIS

*Rejection under 35 U.S.C. § 112, Second Paragraph*

Appellants do not address, in either Brief, the final rejection under 35 U.S.C. § 112, second paragraph, of claim 24 (*see* Ans. 3). No discussion, argument, or evidence pertaining to this rejection is presented by Appellants.

Consequently, Appellants are deemed to have waived contesting this ground of rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii). This ground of rejection for dependent claim 24 accordingly will be sustained.

*Anticipation*

*Claims 4-6 and 12-29*

All of claims 5, 13-20, and 22-29 directly or indirectly depend from collectively argued independent claims 4, 6, 12, and 21 (App. Br. 7-9; Reply Br. 7-10). These independent claims cover MPLS protection switching from a failed working path for information transmission to a protection path that is executed by a protection switching node upstream from the failure at an origin of the working and protection paths (FF 5-8; *see also* Reply Br. 9).

Appellants argue that Cao is deficient because the reference "discloses that [a] sink [not a source] router selects a secondary path upon failure of the primary path. (See col. 3, lines 40-42, and col. 10, lines 9-14 . . .)" (App. Br. 8). The Examiner quotes Cao from column 3, lines 39-63 (Ans. 10), and in contradistinction finds that Cao there describes a "source node LSRS, [at an] origin of both working path and protection path . . . [that] routes data to the sink router LSRE via the protection path when it receive[s] the failure notice" (Ans. 11). On reviewing Cao, we find the evidence of record supporting Appellants' position.

Cao's disclosures quoted by the Examiner include the following that is emphasized by the Examiner: "If . . . a failure is detected, the router that first detects the failure propagates this information to the source and sink

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routers" (49-51; Ans. 10) (underlining omitted). Further referencing Cao
Figure 1, the Examiner finds:

> Cao discloses the source node LSRS includes an input port for
> receiving the propagated failure information i.e. link between LSRS
> and LSRA. Also, the source node LSRS, origin of both working path
> and protection path, receives data from a source (not shown in figure
> 1) and routes data to the sink router LSRE via the protection path
> when it received the failure notice.

(Ans. 11). Apparently, based on the cited Cao disclosures, the Examiner
reasons that the reference teaches a source node receiving failure
information and, consequently, re-routing data transmission.

The Examiner cites no Cao disclosure teaching a source router both
receiving failure notification *and* switching to a different path as a
consequence of receiving a failure notification. We, as does the Examiner,
find Cao disclosing propagation of failure notification to source and sink
routers, i.e., switches (FF 2, 3). We, however, do not find Cao teaching that
a source router switches information transmission from a failed path to a
secondary path. Instead, we find Cao explicitly disclosing that when "a
failure is detected, the router that first detects the failure propagates this
information to the source and sink routers . . . [, and] the sink router switches
to the secondary path for communications" (Cao, col. 3, ll. 49-55; FF 3).
Such re-routing by a Cao sink router on receiving a failure notification, we
find to be repeatedly disclosed by Cao (FF 3).

We also find that Cao discloses that after a sink router has switched
communications to a secondary path, the source router may then establish a
new secondary path (FF 4). The independent claims, however, cover MPLS
protection switching from a failed working path for information transmission

to a protection path that is executed by a protection switching node upstream from the failure at an origin of the working and protection paths (FF 5-8). Cao sink routers are disclosed as switching paths and are not at an information entry location, but are at the destination location for information transmission (FF 2, 3). Therefore, Cao's sink router that switches communications paths is not at an origin for working and protection paths as recited for MPLS protection switching in the independent claims.

The record we are persuaded sustains Appellants in rebutting the Examiner's rejection under § 102(e) of independent claims 4, 6, 12, and 21 as being anticipated by Cao. We, accordingly, will not sustain the Examiner's rejection of independent claims 4, 6, 12, and 21, nor will we sustain the rejection under § 102(e) of their dependent claims 5, 13-20, and 22-29 that incorporate by reference the disputed limitations.

## CONCLUSIONS

1. Appellants have not shown that the Examiner erred under § 112, second paragraph, in finding claim 24 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

2. Under § 102(e), Appellants have shown that the Examiner erred by finding Cao teaching information path switching by a protection switching node upstream from a failed transmission path at an origin of transmission paths in rejecting claims 4, 6, 12, and 21.

DECISION

We sustain the Examiner's rejection under § 112, second paragraph, of claim 24. We do not sustain the Examiner's decision rejecting claims 4-6 and 12-29 under§ 102(e).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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